National Oceanic and Atmospheric Administration
Environmental Compliance Program
Strategic Plan

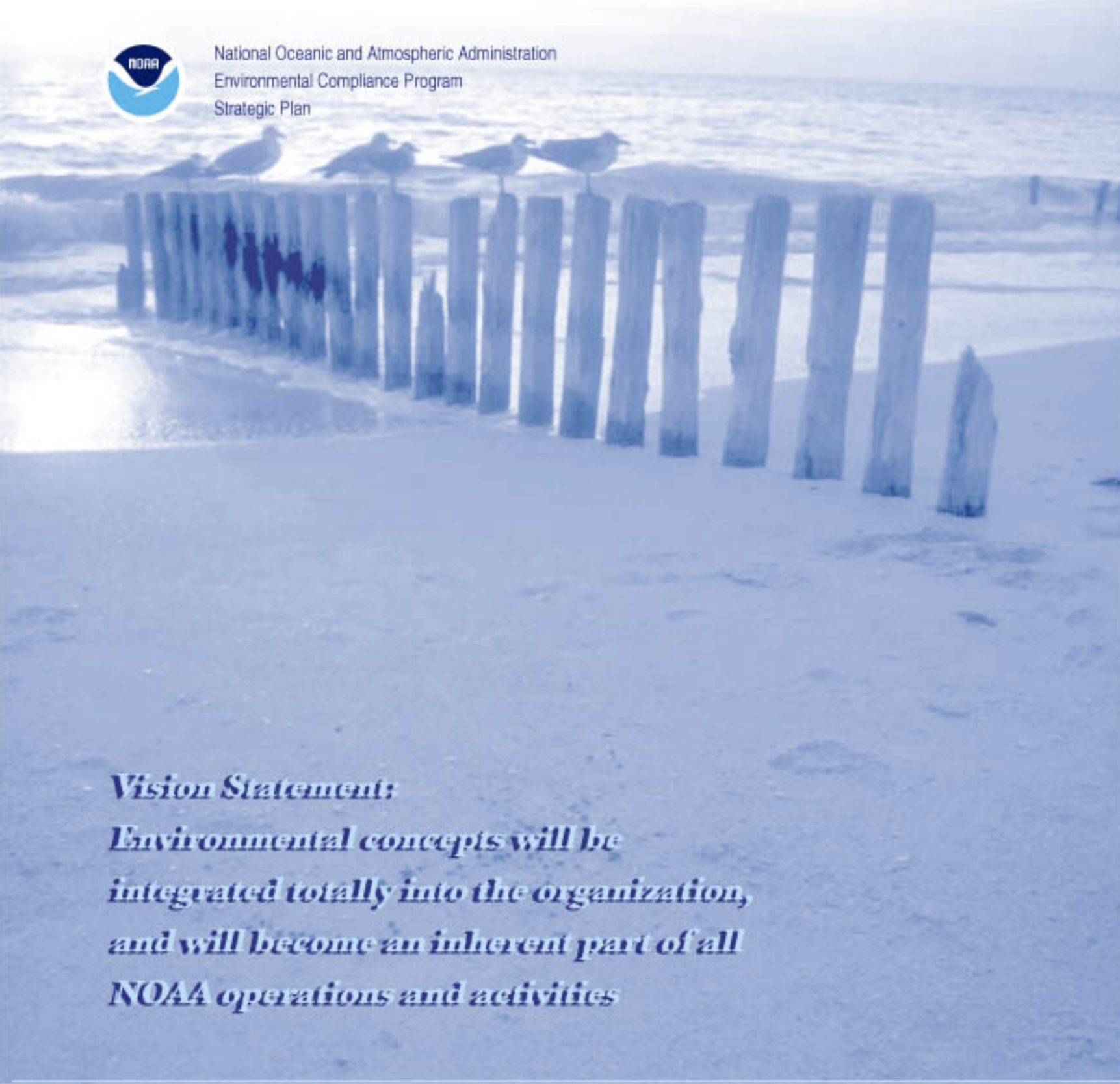
The mission of NOAA's Environmental Compliance Program is to ensure that the Agency, its employees, and affiliates conduct their activities in an environmentally responsible manner that:

Complies with applicable laws, regulation, and Executive Orders

Contributes to a safe and healthful workplace

Safeguards the community and natural environment

National Oceanic and Atmospheric Administration
Environmental Compliance Program
Strategic Plan



Vision Statement:
Environmental concepts will be integrated totally into the organization, and will become an inherent part of all NOAA operations and activities

Contents

This document was prepared in compliance with the May 1996 Strategic Plan of the National Oceanic and Atmospheric Administration, *1995-2005 NOAA Strategic Plan: A Vision for 2005.*

MISSION STATEMENT

The mission of NOAA's Environmental Compliance Program is:

To ensure that the Agency, its employees, and affiliates conduct their activities in an environmentally responsible manner that:

- **Complies with applicable laws, regulations, and Executive Orders;**
- **Contributes to a safe and healthful workplace;**
- **Safeguards the community and natural environment.**

VISION STATEMENT

The guiding vision of NOAA's Environmental Compliance Program is:

Environmental concepts will be integrated totally into the organization, and will become an inherent part of all NOAA operations and activities.

GOALS

The Goals of NOAA's Environmental Compliance Program are:

Goal 1: Restore Contaminated Properties.

Goal 2: Ensure Environmental Compliance and Pollution Prevention.

Goal 3: Sustain Environmental Compliance through Environmental Management Systems.

THE CHALLENGE

Environmental protection in the United States is a complex system of federal, state, and local requirements. These requirements include statutes, regulations, permit conditions, and results of court cases. As an example of this complexity, the use of any toxic chemical requires knowledge of not just one but two or three environmental regulatory programs. Additionally, government management reforms such as the Government Performance and Results Act (Results Act) and the Chief Financial Officers Act make compliance even more complex. The existing system places a tremendous burden on each environmental compliance representative at the facility, line office, and regional level because no one person knows all the requirements, nor is any one individual typically able to meet all the requirements in a timely and efficient manner. The "pentagon diagram" in Figure 1 demonstrates many of the complexities faced by those having to deal with these requirements while supporting NOAA's Missions and Goals.

INTERNAL CHALLENGE

NOAA's environmental compliance program involves all levels of the organization, from senior executives to Laboratory Directors, Meteorologist in Charge, Principle Investigators, scientific and technical support staff, hazardous wastes handlers, and its 12,000 employees. Employees in each of NOAA's line and staff offices, major science centers, administrative support centers, and facilities manage the day-to-day compliance requirements for its nearly 2,000 facilities. Over 550 facilities are staffed and over 300 facilities conduct activities involving various hazardous chemicals ranging from small (laboratory chemical reagents) to large quantities (formaldehyde and petroleum). These facilities include: support facilities for ships and aircraft, research laboratories, weather forecasting offices, office buildings, and unstaffed remote data collecting stations. This variety of NOAA's facilities adds a degree of complexity, from a corporate environmental management perspective.

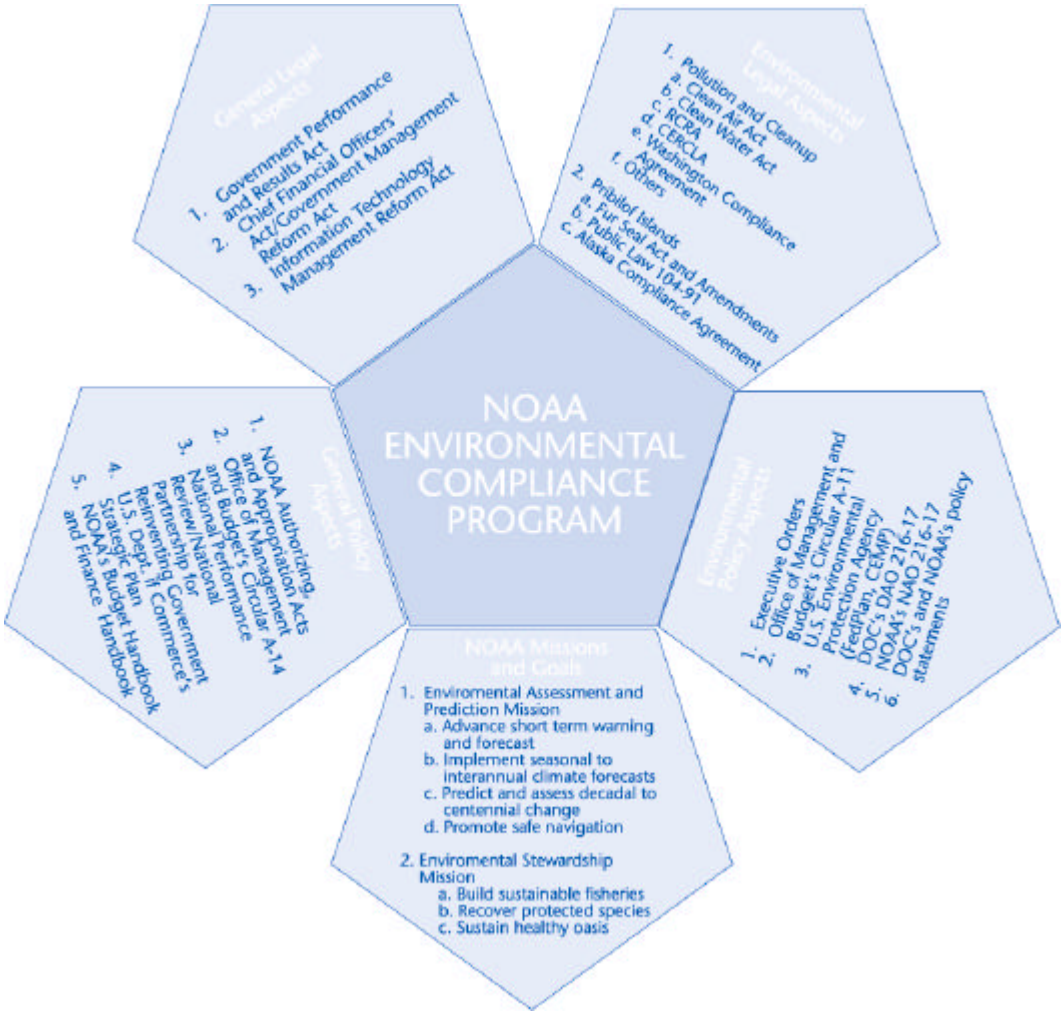
Responsible environmental personnel range from full-time professionals (Regional Environmental Compliance Officers (RECOs) and Safety and Environmental Compliance Officers (SECOs) to those for whom environmental compliance activities are a secondary responsibility. They are charged with ensuring that NOAA's facilities are operated in compliance with all applicable federal, state, and local environmental requirements and that NOAA's personnel are trained and equipped to manage hazards in the workplace. The NOAA Environmental Compliance Program Strategic Plan incorporates environmental management systems. These systems allow those responsible for environmental compliance to take advantage of using compliance documents developed by others. They will be able to draw on resources and guidance from throughout NOAA that will provide the format and content of compliance documents pertinent to their immediate needs. In

addition, emergency response and readiness can be addressed more consistently when a national support network of environmental compliance professionals is available. This national support network is called the NOAA Environmental Compliance Network (see Appendix E).

EXTERNAL CHALLENGE

The external challenges to the NOAA Environmental Compliance Program are shown visually in Figure 1. These external challenges include general legal requirements, general policies, specific environmental legal requirements (Clean Water Act), specific environmental policies (Executive Order 12088) while supporting NOAA's Missions and Goals. These external challenges help define the scope of NOAA's Environmental Compliance Program.

Figure 1: Pentagon Depicting Five Types of Challenges to the NOAA Environmental Compliance Program



SUMMARY OF OBJECTIVES

Associated with each Goal are Objectives. Each Objective provides further focus for attaining the NOAA Environmental Compliance Program's Goals and Vision, and provides guidance for coordinating and aligning activities consistent with the Program's Mission.

GOAL 1:
RESTORE CONTAMINATED PROPERTIES

OBJECTIVE 1.1
IDENTIFY SCOPE OF CONTAMINATION

Complete identification and characterization of contaminated properties using Cleanup and Restore the Environment (CARE) assessments.

OBJECTIVE 1.2
CLEANUP AND RESTORE THE ENVIRONMENT

Cleanup and restore properties on a worst-first basis.

GOAL 2:
ENSURE ENVIRONMENTAL COMPLIANCE AND POLLUTION PREVENTION

OBJECTIVE 2.1
IDENTIFY SCOPE OF POLLUTION PROBLEMS

Identify chemicals and current compliance issues using NOAA's Chemical Information Management System (CIMS) and using EPA's environmental compliance audit protocols.

OBJECTIVE 2.2
CORRECT POLLUTION PROBLEMS

Correct current compliance issues on a project list priority basis using EPA's project prioritization factors.

OBJECTIVE 2.3
PREVENT POLLUTION PROBLEMS

Apply pollution prevention approaches identified in facility pollution prevention plans to reduce the quantity and toxicity of wastes generated and pollutants released by NOAA's facilities on the Nation's lands.

GOAL 3:
SUSTAIN ENVIRONMENTAL COMPLIANCE THROUGH ENVIRONMENTAL MANAGEMENT SYSTEMS — CODE OF ENVIRONMENTAL MANAGEMENT PRINCIPLES

OBJECTIVE 3.1
MANAGEMENT COMMITMENT
NOAA and its Line/ Staff offices and facilities make a written top-management commitment to improve environmental performance by establishing policies which emphasize pollution prevention and the need to ensure compliance with environmental requirements.

OBJECTIVE 3.2
COMPLIANCE ASSURANCE AND POLLUTION PREVENTION
NOAA and its Line/ Staff offices and facilities implement proactive programs that aggressively identify and address potential compliance problem areas and utilize pollution prevention approaches to correct deficiencies and improve environmental performance.

OBJECTIVE 3.3
ENABLING SYSTEMS
NOAA and its Line/ Staff offices develop and implement information systems and training to enable personnel to perform their functions consistent with regulatory requirements, and the policies and missions of NOAA, its offices and facilities.

OBJECTIVE 3.4
PERFORMANCE AND ACCOUNTABILITY
NOAA and its Line/ Staff offices and facilities develop and implement a process for connecting employee performance to environmental compliance for all levels of the organization.

OBJECTIVE 3.5
MEASUREMENT AND IMPROVEMENT
NOAA and its Line/ Staff offices and facilities will conduct Environmental Management Assessments to evaluate progress toward meeting its environmental goals and will use the results to benchmark with other federal agencies and continue to improve environmental performance.

BENEFITS

SUPPORT OF NATIONAL GOALS

NOAA's Environmental Compliance Program is consistent with and supports the national goals stated in the Nation's environmental statutes (see Table 1.) The NOAA Environmental Compliance Program's projects and activities are aligned directly with these stated national goals and are authorized and mandated by provisions of environmental statutes or their regulations. The aggregate impact of all Federal agencies plays a major role in achieving these national environmental goals. The cross-cutting and multi-agency aspects of Environmental Statutes' National Goals are coordinated through the U.S. Environmental Protection Agency and through activities of the multi-agency Civilian Federal Agency Environmental Task Force. NOAA must do its part and accomplish its mission consistent with these national environmental goals.

BENEFITS TO THE NATION

The benefits to the Nation of a viable NOAA Environmental Compliance Program can be stated in terms of risks. A viable environmental compliance program can reduce human health and environment risks. A viable program can reduce financial risks — financial liabilities — associated with harmed people and damaged property, and associated with cleaning up pollutants and contaminates. A viable program can reduce legal civil and criminal risks — legal liabilities — associated with noncompliance and violations. Thus a viable NOAA Environmental Compliance Program can protect the public and the environment, can save taxpayers money, and can diminish exposure of NOAA and its workers to costly legal consequences.

TABLE 1 EXAMPLES OF ENVIRONMENTAL STATUTES AND THEIR NATIONAL GOALS	
STATUTE	**NATIONAL GOAL(S)**
National Environmental Policy Act (42 U.S.C. 4341 et seq.)	"[T]o promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate health and welfare ...."
Clean Air Act (42 U.S.C. 7401 et seq.)	"[T]o protect and enhance the quality of the Nation's air resources so as to promote public health and welfare ..."
Clean Water Act (33 U.S.C. 1251 et seq.)	"[To] restore and maintain the chemical, physical, and biological integrity of the Nation's waters."
Resource Conservation and Recovery Act (42 U.S.C. 6901 et seq.)	"[T]o reduce the amount of waste and unsalvageable materials and to provide for proper and economical solid waste disposal practices." "[T]o promote the protection of health and the environment and to conserve valuable material and energy resources ...." “[T]o eliminate the generation of hazardous waste "so as to minimize the present and future threat to human health and the environment."
Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 9601 et seq.)	"[T]o remove [hazardous substances released into the environment which pose an imminent and substantial threat or danger to public health or welfare] ... and provide for remedial action, ... or take any other response measure ... necessary to protect the public health or welfare or the environment ..."
Toxic Substance Control Act (15 U.S.C. 2601 et seq.)	"[T]o regulate chemical substance and mixtures which present an unreasonable risk or injury to health or the environment, and to take action with respect to chemical substances and mixtures which are imminent hazards ..."
Occupational Safety and Health Act (29 U.S.C. 651 et seq.)	"[T]o assure so far as possible every ... [worker] in the nation safe and healthful working conditions and to preserve our human resources." This includes protecting laboratory workers from hazardous chemicals (see Occupational Exposure to Hazardous Chemicals in Laboratories — Laboratory Standards — (29 CFR 1910.1460)).

BENEFITS TO NOAA

In terms of NOAA, the Environmental Compliance Program's three Goals seek to form a unified partnership with line and staff offices to implement environmental projects and activities. Each line and staff office of NOAA is expected to use this Strategic Plan to align and coordinate developing plans, set goals and objectives, and conduct day-to-day activities. The premise of this Strategic Plan is a partnership between line and staff offices. The partnership will:

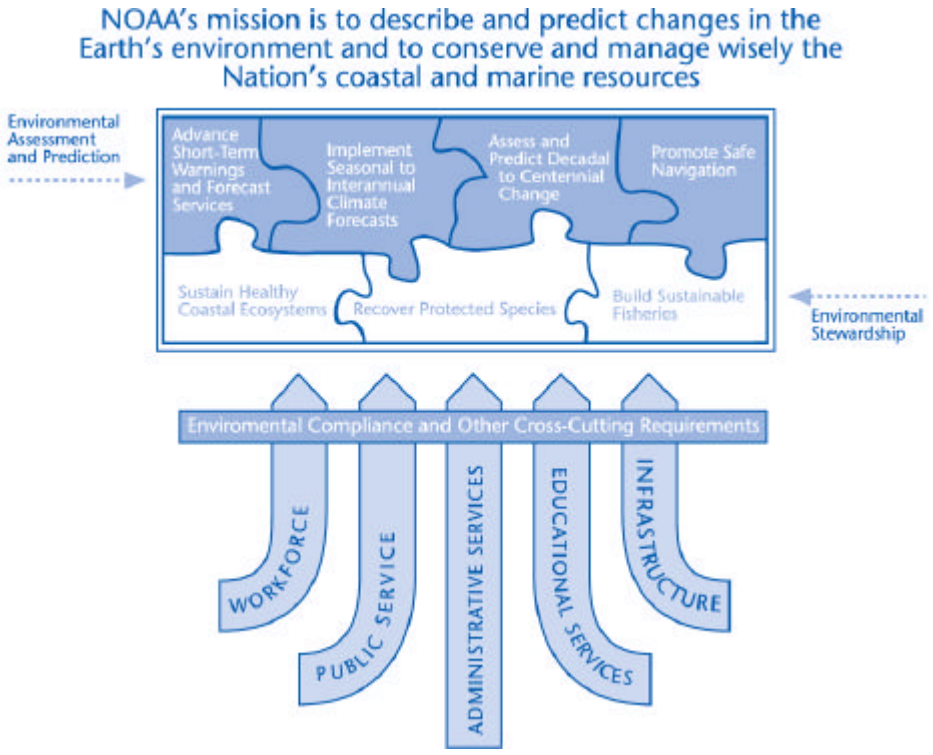
- Facilitate better coordination of resources;
- Eliminate duplicate efforts, reduce costs and create synergy;
- Increase the efficiency and consistency of environmental efforts.

STRATEGY

RELATIONSHIP TO NOAA MISSION

Achieving NOAA's Missions and Strategic Goals depend on NOAA's "supporting infrastructure" (see Figure 2). NOAA's supporting infrastructure consists of its workforce, facilities, administrative services and public and educational services. All of these elements are essential to furthering NOAA's Strategic Goals. The NOAA Environmental Compliance Program is an administrative service which supports the seven NOAA Strategic Goals through improved facility management, and a well-networked and knowledgeable workforce. Facilities operated in an environmentally compliant manner are efficiently operated and are neither potential burdens nor long-term liabilities to the agency. Therefore, such facilities allow more resources to flow to NOAA programs related to its Missions and Strategic Goals.

Figure 2: Relationship of the Environmental Compliance Program Strategic Plan to NOAA's Seven Strategic Goals



NOAA's facilities are major national assets and are vital to accomplishing NOAA's Missions and Goals. Environmental compliance issues at facilities involve past, present, and future activities. The three Goals established under this Strategic Plan are aligned with these three time perspectives. Facility issues within these perspectives are presented in Table 2.

TABLE 2
GOALS AND TIME PERSPECTIVES OF FACILITIES' ENVIRONMENTAL COMPLIANCE ISSUES

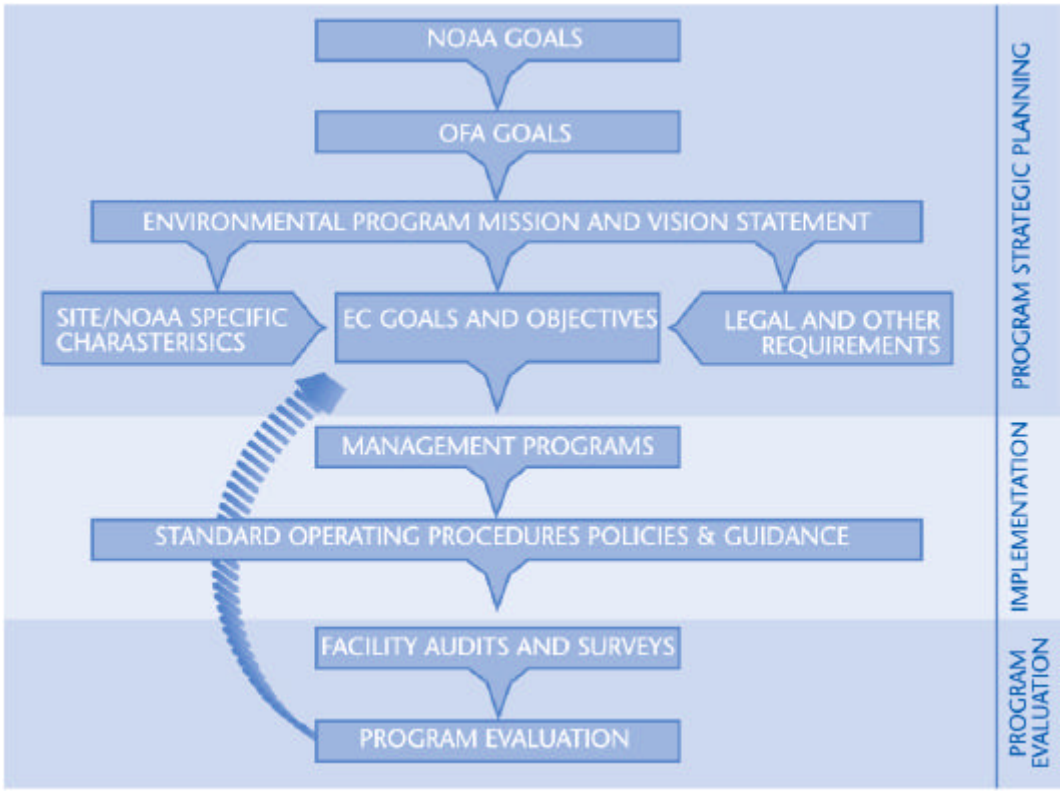
GOAL 1: CLEANUP "Past"	GOAL 2: ENSURE COMPLIANCE "Present"	GOAL 3: SUSTAIN COMPLIANCE "Future"
• Regulatory Liabilities • Historical Neglect • Property Acquisitions	• Operations and Maintenance • Existing Legal Requirements • Emergencies	• Planning • Growth/Downsizing • New Regulations

Goal 1, Restore Contaminated Properties, addresses historical problems that first must be characterized properly and then resolved on a worst-first basis. Goal 2, Ensure Compliance and Pollution Prevention, addresses current areas of noncompliance at NOAA facilities and areas where best management practices are needed to prevent future noncompliance. In addition, Goal 2 places an emphasis on expanding NOAA's pollution prevention activities as a key best management practice.

Goal 3, Sustain Environmental Compliance Through Environmental Management Systems, is concerned with maintaining the highest practical level of environmental compliance at NOAA facilities and in NOAA operations. Specifically, Goal 3 is future-oriented and is intended to keep NOAA facilities and NOAA operations in compliance with environmental standards by applying the Code of Environmental Management Principles (CEMP) as environmental management systems.

An environmental management system is defined (by the International Organization for Standardization (ISO)) as "that part of the overall management system that includes organizational structure, planning activities, responsibilities, practices, procedures, processes, and resources for developing, implementing, achieving, reviewing, and maintaining the environmental policy." Implementing environmental management systems, like the Code of Environmental Management Principles, with the support of NOAA's line and staff offices will allow NOAA to comply more efficiently and effectively with Federal, state, and local environmental requirements. The strategic model of NOAA's Environmental Management Systems is shown in Figure 3. Successful environmental management systems also support NOAA's efforts to comply with the Results Act by putting in place a complete process, from setting policy to measuring results.

Figure 3: Strategic Perspective of NOAA's Environmental Management System Model

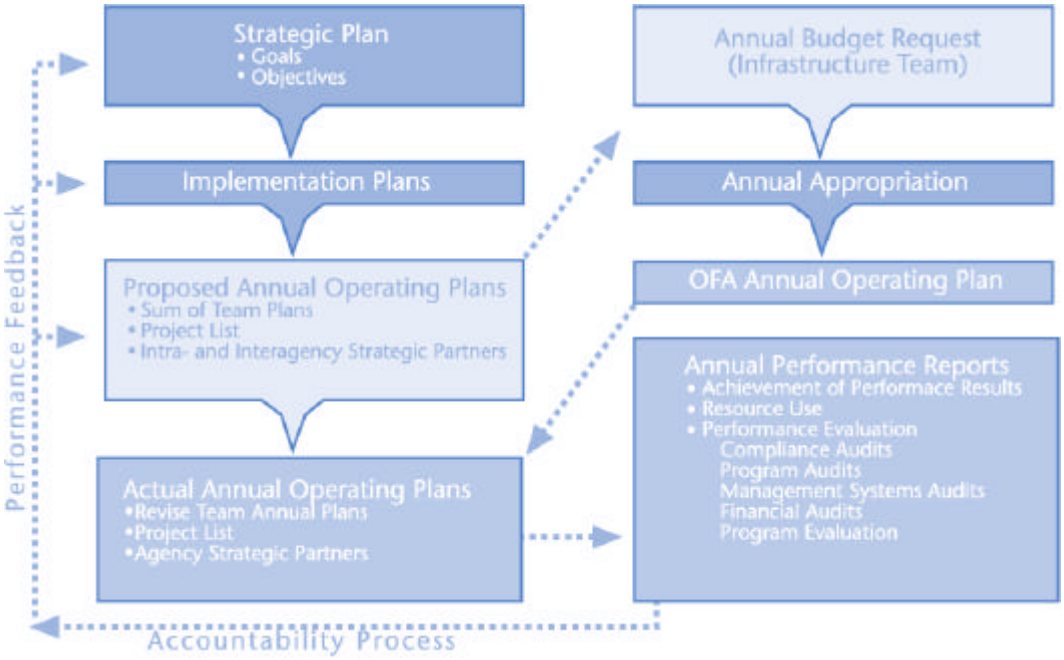


MEANS OF ACHIEVING GOALS

The strategic model for the environmental compliance planning, budgeting, and accountability process is shown in Figure 4. This process is a continuing cycle of strategic planning implementation, budgetary actions, and program evaluations. This process is essential for implementing and sustaining the Code of Environmental Management Principles, and it is embodied in Goal 3. This process also is the essential mechanism for implementing Goals 1 and 2. The strategic model is a hierarchy of plans that include the Strategic Plan (ten-year scope), Implementation Plan (five-year scope), and Annual Operating Plan (one-year scope).

The three Goals presented in this program strategic plan will be achieved through the effective integration of NOAA's human resources, capital resources, and technology with regular and meaningful program evaluations. Human resources will include "Corporate" Teams — that is, people in the NOAA's Environmental Compliance Network, Program and Project Managers, and Strategic Partnerships. Capital resources and technology resources will be applied to meet these goals. Finally, program evaluations will be conducted using several sources of information to determine if revisions need to be made to any Goals or their Objectives.

Figure 4: Strategic Model for NOAA's Environmental Compliance Planning, Budgeting, and Accountability Process



Human Resources

Human resources include corporate teams, program and project managers, the NOAA Environmental Compliance Network, and strategic partnerships.

Corporate Teams

One important strategy of the NOAA Environmental Compliance Program is to accomplish the three Goals by creating four NOAA Corporate Teams; this strategy is referred to as "3 Goals - 4 Teams." Each team is responsible for a major NOAA Environmental Compliance Program business element. These business element teams are: Environmental Audit Team, Hazardous Chemical Information Management System and Pollution Prevention Team, Corporate Environmental Training Program Team, and Information Technology Management Team. Table 3 provides some examples of how these teams relate to achieving the three Goals.

TABLE 3 "3 GOALS - 4 TEAMS" EXAMPLES OF ACHIEVING GOALS THROUGH TEAMS			
TEAM	**GOAL 1: CLEANUP**	**GOAL 2: ENSURE COMPLIANCE**	**GOAL 3: SUSTAIN COMPLIANCE**
ENVIRONMENTAL AUDIT TEAM	Develop business methods and procedure for Cleanup and Restore the Environment (CARE) NOAA property assessments	Develop business methods and procedure for: • Environmental compliance audits at NOAA facilities • Quarterly Program Reviews	Develop business methods and procedure for: • Environmental management systems audits at the Program level and at facilities • Annual Program Performance Report
CHEMICAL INFORMATION MANAGEMENT SYSTEM AND POLLUTION PREVENTION (CIMS-P2) TEAM	Develop business methods and procedure for recording past and current facility hazardous materials activities	Develop business methods and procedure for: • Identifying capital asset projects • Identifying day-to-day hazardous materials management needs	Develop business methods and procedure for: • Identifying pollution prevention solutions • Managing hazardous materials day-to-day activities
CORPORATE TRAINING PROGRAM TEAM	Identify curriculum and select method of training for: • Cleanup and Closure • Property Transfers	Identify curriculum and select method of training for Hazardous Materials and Waste Management	Identify curriculum and select method of training for: • Environmental Awareness • Environmental Management Systems
INFORMATION TECHNOLOGY MANAGEMENT TEAM	Develop business methods and procedure for recording cleanup liabilities and projects	Develop business methods and procedure for recording regulatory compliance projects	Develop business methods and procedure for program management needs (budget, financial, personnel, documentation, regulatory recordkeeping, documentation)

Sustainable environmental systems built by teams will allow NOAA to assure environmental compliance. All teams will consider the following five guiding principles of environmental sustainability (modified from Angela Park of The Catalyst Company):

- **Integration:** Taking the systems approach to solving problems and making decisions
- **Anticipation:** Thinking long term and being proactive, because "time" does matter; failure to anticipate can be costly in terms of money and human resources
- **Participation:** Involving stakeholders; promoting teams; partnerships; and joint ventures; and building alliances as processes that achieve meaningful outcomes

- **Efficiency:** Using resources more wisely: pollution prevention and energy conservation are better than end-of-pipe and wire "fixes"

- **Equity:** Moving away from purely technical solutions to solutions that incorporate considerations that are important to stakeholders

The four teams will be multi-disciplinary and cross-functional in nature, drawn from throughout NOAA, such as environmental compliance, safety, contracting, finance, construction, and information technology. The teams will include personnel from all appropriate levels of the line and staff offices which reflect the program stakeholders. Additionally, environmental professionals from NOAA's Environmental Compliance Staff, Safety and Environmental Compliance Officers, and contractor support will supplement the teams. A charter will be required for each team to detail the nature and extent of the program, budget constraints and accountability for accomplishing Objectives and Multiyear Outcomes associated with the Program's three Goals. Each team will meet as necessary to develop a Multiyear Plan of Actions and Milestones and an Annual Plan of Action and Milestones.

Program and Project Managers

The NOAA Environmental Compliance Program will emphasize the development and maintenance of strong Program and Project Managers. This is a traditional strategy which relies on such managers to implement goals through technical experts who manage program business elements or projects. The technical experts within NOAA's Environmental Compliance Program are the Safety and Environmental Compliance Officers (SECOs), Regional Environmental Compliance Officers (RECOs), and the headquarters Environmental Compliance Staff.

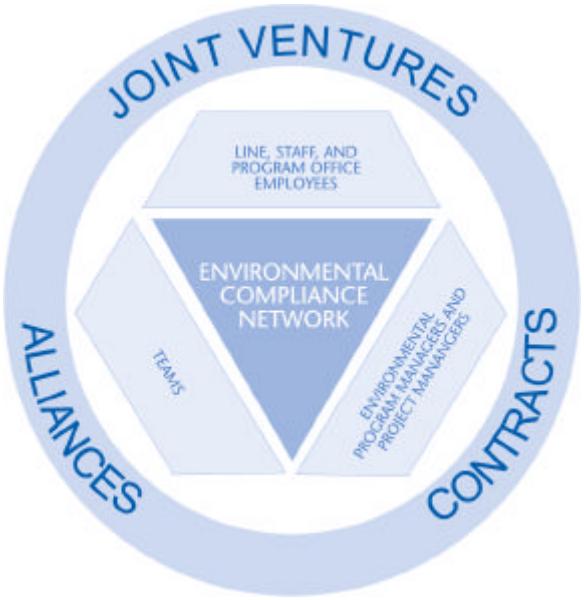
NOAA Environmental Compliance Network

The NOAA Environmental Compliance Program created a corporate network of NOAA employees that cuts across organizational boundaries in order to increase efficiency, reduce cost and create synergy. This corporate network is NOAA's Environmental Compliance Network. The NOAA Environmental Compliance Network is a triad (see Figure 5), composed of: (1) NOAA Line and Staff Offices employees; (2) NOAA Environmental Compliance

Figure 5: NOAA Environmental Compliance Network

"corporate teams," and (3) NOAA environmental compliance program and project managers who are experts and professionals. This Network will make NOAA's large organizational structure into a "small world." This "small world" is realized through linking people together at NOAA environmental conferences and training sessions, and through NOAA's intranet and NOAA's Environmental Compliance Program's Web Site which form shorter lines of communication.

Figure 6: NOAA Environmental Compliance Network and Strategic Partners



Strategic Partnerships

Strategic Partnership arrangements will be employed to achieve program goals. Such arrangements include external alliances, joint ventures, and contracts. These arrangements enable NOAA to leverage resources with organizations external to NOAA and to augment NOAA's Environmental Compliance Network (see Figure 6). Such partnerships are expected to result in training documents, policy guidelines, best management practices, and even provide temporary assigned technical experts.

Capital Resources

The NOAA Environmental Compliance Program's three Goals are aligned directly with the Office of Management and Budget's (OMB) Circular A-11 *(Preparation and Submission of Budget Estimates, July 1998)* policies. Specifically the Program's Goals and OMB's policies are aligned as follows:

- Goal 1, Cleanup, aligns directly with OMB's policies on incorporating costs for "remedial environmental projects" (section 12.5 (t)) and "environmental restoration" (section 300.4 (a)).

- Goal 2, Ensure Compliance, aligns directly with OMB's policies on incorporating costs for "compliance and ... for pollution control" (section 12.4 (f)) and for "pollution control standards compliance" (section 12.5 (d)(1)).

- Goal 3, Sustain Compliance, aligns directly with OMB's policies concerning costs for improving management systems (section 12.3 (g)) and for mixed financial management systems (sections 15.4, 40, and 42).

It is against OMB's policy to disclose long-range budget estimates (see section 12.8 and 12.9). However, it is possible to gain insight about future capital resource needs from historical information, future major activities and trends, and accessible information sources; this insight is provided in Table 4.

TABLE 4
INDICATORS OF FUTURE CAPITAL RESOURCES NEEDS AND INFORMATION SOURCES

INDICATORS AND INFORMATION SOURCES	GOAL 1 CLEANUP	GOAL 2 ENSURE COMPLIANCE	GOAL 3 SUSTAIN COMPLIANCE	REMARKS
Annual Budget Prior to 1995	about $1.5 million	about $0.4 million	about $0.1 million	Budget limited to about $2.0 million
Annual Budget Fiscal Year 1998	$2.0 Million	$1.7 million	$0.3 million	Separate budget for Pribilof Islands, AK
Project Trend Prior to 1996	Cleanup Pribilof Islands, AK	Remove several underground tanks	Less than 10 facility compliance audits	Washington State compliance agreement
Projects Fiscal Year 1998	Cleanup Pribilof Islands, AK	Remove several underground tanks	More than 18 facility compliance audits	Tank removal projects finished
Project Trend Future (+3 years)	Cleanup closed NMFS & NWS facilities; cleanup decommissioned ships	Several pollution prevention projects; remove several ozone depleting chemical systems	More than 18 facility compliance audits; buy & operate mixed financial systems	More management systems needs (Results Act, CFO Act); closing facilities
Information Sources for unfulfilled capital resources needs	Unfunded cleanups reported in NOAA Annual Financial Statement	NOAA projects reported in EPA's "FedPlan" database	[In future reported in: Annual Program Performance Reports; Program Evaluations]	Information is more accessible to others, including the public

Technology (including Information Technology)

The NOAA Environmental Compliance Program is undergoing a major change in technology requirements. In the past the Program depended on acquiring capital assets associated with pollution control technology and cleanup technology. In the future the Program will depend on acquiring capital assets associated with pollution prevention approaches and management systems. In simple terms, the change is from projects involving

major construction and equipment to services for consulting on pollution prevention approaches and for implementing management systems. This change is consistent with the national change in the private sector moving away from providing "goods" to "services." Table 5 shows this change in environmental compliance.

TABLE 5
CHANGES IN ENVIRONMENTAL COMPLIANCE FROM "GOODS" TO "SERVICES"

TYPE OF PRODUCT	GOAL 1 CLEANUP (Past)	GOAL 2 ENSURE ENVIRONMENTAL COMPLIANCE (Present)	GOAL 3 SUSTAIN ENVIRONMENTAL COMPLIANCE (Future)	REMARKS
"GOODS"	Clean land, free of contamination	Pollution control facilities and pollution control equipment	—	Old way: depends on constructing facilities and purchasing equipment
"SERVICES"	—	Designing out sources of pollution and contamination	Providing information for problem solving and decision making to avoid environmental problems	New way: depends on awareness & knowledge, and information technology management

This change is brought about by EPA and Congress. EPA is emphasizing pollution prevention for Federal facilities through the Code of Environmental Management Principles and guidance documents (for example, *Federal Facility Pollution Prevention Planning Guide,* EPA-300-B-94-013, December 1994; and *Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies for Executive Order 12856 and Beyond*, EPA 300-B-94-007, April 1994). Congress has enacted several statutes which form a framework of management systems (for example, Government Performance and Results Act of 1993, Government Management Reform Act of 1994, Information Technology Management Reform Act of 1996). These actions by EPA and Congress require new and different technology investments to be made in NOAA's Environmental Compliance Program.

Pollution prevention approaches incorporate a wide scope of technologies and technology-related items. Pollution prevention approaches yield sustainable benefits such as increased energy and water efficiency to improve environmental performance at NOAA facilities. The development and implementation of pollution approaches requires technical and professional experts to assess the application of technologies and related items to specific

facilities and to evaluate the potential benefits of competing approaches using life cycle analysis and total cost assessment techniques.

Management systems also incorporate a wide scope of technologies and technology related items. Management systems require technologies to support information management, communication, and documentation. Specifically, these technologies include computer software and hardware. These technologies require technical and professional experts to develop and maintain databases, software, and hardware.

Program Evaluation

The Government Performance and Results Act (Results Act) requires that periodic program evaluations be used to revise strategic goals and objectives. "Program Evaluation," as defined by the General Accounting Office (GAO), is "the application of scientific research to assess program concepts, implementation, and effectiveness" (from page 88 of GAO's *Designing Evaluations* (May 1991)). Specifically, program evaluation will be necessary to understand how well the Environmental Compliance Program is meeting its three strategic goals.

Conducting program evaluations will require information. Some information sources exist, like the facility environmental compliance audits associated with Goal 2. Other information will have to be initiated, like the facility Cleanup and Restore the Environment (CARE) assessments associated with Goal 1, and the Environmental Management Systems audits associated with Goal 3. Some typical information sources and their characteristics for the NOAA Environmental Compliance Program's program evaluation are presented in Table 6.

As the Results Act requires the Strategic Plan to be updated and revised every three years, it is appropriate that the periodic program evaluations be conducted the year prior to the update and revision of the Strategic Plan. This will allow the program evaluation information to be incorporated into the updated and revised Plan.

TABLE 6
NOAA ENVIRONMENTAL COMPLIANCE PROGRAM - PROGRAM EVALUATION
INFORMATION SOURCES AND THEIR CHARACTERISTICS
(modified from M. D. LaGrega, P. L. Buckingham, J. C. Evans (1994) Hazardous Waste Management)

SOURCE OF INFORMATION (and type document)	CHARACTERISTICS						
	OBJECTIVITY	AUDITING EXPERTISE	POLLUTION CONTROL EXPERTISE	ENVIRONMENTAL REGULATORY EXPERTISE	INSTITUTIONAL MEMORY	FAMILIARITY WITH OPERATIONS	PARTICIPATION IN SOLUTION
REGULATORY AGENCY 1. EPA's Quarterly Environmental Compliance Status Reports 2. EPA, State & local inspection reports & enforcement actions 3. EPA conducted Environmental Management Reviews	Very high	High	Excellent but usually specialized	Excellent but usually specialized	None	Low	Indirect
CONTRACTOR 1. Compliance audits (phase 1) 2. Specific program audits (phase 2) 3. Environmental Management Systems audits (phase 3) 4. Organization development studies	High	High	Excellent usually broad	Excellent usually broad	None	Low	Nominal
CONGRESS General Accounting Office audits	Very high	High	None	Almost none	None	None	None
INDEPENDENT INTERNAL 1. NOAA Annual Financial audits 2. Inspector General audits 3. Office of General Counsel's reports	Very high	High	None	Almost none	None	None	None
PROGRAM 1. Compliance audits (phase 1) 2. Specific program audits (phase 2) 3. Environmental Management Systems audits (phase 3) 4. Cleanup and Restore the Environment (CARE) property assessments 5. Organization development studies	Questionable	Nominal	Varies	Good usually broad	Corporate memory	High	High and direct

Appendix A

Bibliography

BIBLIOGRAPHY

Anreeva, N. 1998. "Do the math: It's a small world." *Business Week*. August 17 (at pages 54-55).

Bolman, Lee G. and Terrence E. Deal. 1997. Reframing Organizations: Artistry, Choice, and Leadership. Jossey-Bass Publishers, San Francisco, CA.

Collins, J.J. and Chow, C.C. 1998. "It's a small world." *Nature*. June 4 (at pages 409-410).

Department of Commerce (DOC). 1997. "Department of Commerce Strategic Plan for 1997-2002". September.
http://www.doc.gov/bmi/BUDGET/strtgc/strtone.htm

Department of Commerce Environmental Management. 1997. "Framework-3." (Includes DOC Administrative Order 216-17 and NOAA Administrative Order 216-17.)
http://www.masc.noaa.gov/ecims/tablecon.html

Environmental Protection Agency (EPA). 1997, 1995. "Environmental Audit Program Design Guidelines for Federal Agencies". Federal Facilities Enforcement Office.

EPA. 1997. "Implementation Guide for the Code of Environmental Management Principles for Federal Agencies (CEMP)". Office of Enforcement and Compliance Assurance. EPA315-B-97-001. March.

EPA. 1996. "Generic Protocol for Conducting Environmental Audits of Federal Facilities". Office of Enforcement and Compliance Assistance. EPA 300-B-96-012A\B. December.
http://es.epa.gov/oeca/fedfac/complian/complete.pdf

EPA 1994. "Federal Facility Pollution Prevention Planning Guide". December.

EPA. 1994. "Pollution Prevention in the Federal Government: Guide for Developing Pollution Prevention Strategies". April.

GAO. 1998. "Managing for Results: The Statutory Framework for Performance-Based Management Accountability". January.

GAO. 1991. "Designing Evaluations". May.

National Oceanic and Atmospheric Administration (NOAA). 1996. "1995-2005 NOAA Strategic Plan". May.
http://www.noaa.gov/str-plan/toc.htm

NOAA, Environmental Compliance Staff. 1996. "Environmental Awareness Video".

NOAA, Office of Finance and Administration. "Program Strategic Plan".

Office of Management and Budget (OMB). 1997. "Preparation and Submission of Budget Estimates." Circular A-11, revised. June 23.
http://www.whitehouse.gov/WH/EOP/OMB/html/circulars/a011

OMB. 1998. "Preparation and Submission of Strategic Plans and Annual Performance Plans." Circular A-11, Part 2. July 1.

Office of the President of the United States. 1978. Executive Order 12088. "Federal Compliance with Pollution Control Standards". October 13.

Park, Angela. 1998. "Environmental Sustainability Overview," Personal Communications. The Catalyst Company. (202-333-4234).

Peterson, I. 1998. "Close connections: It's a small world of crickets, nerve cells, computers, and people." *Science News*. August 22 (at pages 124-126).

U.S. Congress. *Chief Financial Officers Act of 1990.*
http://www.npr.gov/library/misc.cfo.html

U.S. Congress. *Clean Air Act of 1955.*

U.S. Congress. *Clean Water Act of 1977.*

U.S. Congress. *Community Environmental Response Facilitation Act (CERFA).*

U.S. Congress. *Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).*

U.S. Congress. *Government Management Reform Act of 1994.*
gopher://pula.financenet.gov:70/00/docs/legis/s-2170.msg.gop

U.S. Congress. *The Government Performance and Results Act of 1993.*
http://npr.gov/library/misc/s20.html

U.S. Congress. *Information Technology Management Reform Act of 1996.*
http://www.itpolicy.gsa.gov/mks/regs-leg/s1124_en.htm

U.S. Congress. *National Environmental Policy Act of 1969.*

U.S. Congress. *Resource Conservation and Recovery Act of 1976.*

Watts, D.J. and Strogatz, S.H. 1998. "Collective dynamics of 'small-world networks." *Nature.* June 4 (at pages 440-442).

Appendix B

Glossary

GLOSSARY

CERCLIS — The CERCLA Information System is an Environmental Protection Agency (EPA) database that provides information about Superfund sites on the NPL. Data for Enforcement Analysis (IDEA) contains a subset of CERCLIS data related to compliance status.

Customer — A person or organization to whom an agency provides a product or service; customers can be either internal or external to the agency

Environmental Legal Liabilities — Conditions at a facility that are causing that facility to be in violation of environmental statutes and/or regulations. Such violations include historical legal liabilities (Defined below)

Environmental Management Review — An audit of a government facility conducted by EPA on a voluntary basis as a means of assisting the facility in inproving its environmental management system

Environmental Management System — A comprehensive management system tailored to the environmental activities of an organization

General goal — A general goal is an elaboration of the mission statement, developing with greater specificity how an agency will carry out its mission. The goal may be of a programmatic, policy, or management nature and is expressed in a manner that allows a assessment to be made in the future of whether the goal was or is being achieved. *Source: Office of Management and Budget (OMB), Circular A-11, Sec. 200.2, p. 271*

Historical Legal Liabilities — Those environmental legal liabilities that are associated with contaminated media caused by practices that were conducted prior to 1980.

IDEA — The Integrated Data for Enforcement Analysis (IDEA) database contains data from 15 EPA and EPA-related databases, including: RCRIS, CERCLIS, SETS, AND ERNS.

Mission statement — A mission statement presents clear picture of an organization's purpose and the reason for its existence. It identifies the nature and scope of present operations and describes the values and priorities of the organization.

Outcome goal — An outcome goal is a description of the intended result, effect, or consequences that will take place because a program or activity is carried out. *Source: OMB, Circular A-11, Sec. 200.2, p. 271.*

Outcome measure — An outcome measure assessment of the results of a program activity, compared with its intended purpose. *Source: GPRA, Sec. 1115.*

Output goal — An output goal is a description of the level of activity or effort that will be produced or provided over a period of time or by a specified date, including a description of the characteristics and attributes established as standards in the course of conducting the activity or effort. *Source: OMB, Circular A-11, Sec. 200.2, p. 271.*

Output measure — An output measure is the result of the tabulation, calculation, or recording of activity or effort and can be expressed in a quantitative or qualitative manner. *Source: GPRA, Sec. 1115.*

Performance goal — A performance goals is a target level of performance expressed as a tangible, measurable objective, against which actual achievement can be compared, including a goal expressed as a quantitative standard, value, or rate. *Source: OMB, Circular A-11, Sec. 200.2, p. 271*

Performance indicator — A performance indicator is a particular value or characteristic used to measure output or outcome. *Source: OMB, Circular A-11, Sec. 200.2, p. 271*

Phase 1 Environmental Audits — A review of facility conditions in regard to specific media areas (e.g., air, water, and solid and hazardous wastes) with a focus on compliance with federal environmental requirements.

Phase 2 Environmental Audits — A review of specific environmental programs (such as management of the water program) with attention to cross-cutting issues and approaches such as pollution prevention and seven other organizational disciplines that help foster success in the technical management areas outlined in Phase 1 audits

Phase 3 Environmental Audits — An examination of all management of all environmental programs at a facility and the parent agency to help establish compliance as a starting point rather than the goal of environmental performance

Program activity — A program activity is a specific activity or project as listed in the program and financing schedules of the annual budget of the United States Government. *Source: GPRA, Sec. 1115.*

Program evaluation — A program evaluation is an assessment, through objective measurement and systematic

Appendix C

Strategic Plan Development Background

STRATEGIC PLAN DEVELOPMENT BACKGROUND

Stakeholders were instrumental in the strategic planning process

The development of this strategic plan was a collaborative effort among various internal and external NOAA stakeholders. The internal stakeholders included a cross-section of NOAA staff having diverse backgrounds (see Appendix D) and experiences and consisting of representatives of the line offices, as well as headquarters managers. Their roles and skills ranged from those of general managers to those of environmental specialists.

Strategic Planning Workshops

January 12 to 16, 1998
The Bolger Center
Potomac, Maryland

March 31 to April 3, 1998
Gallaudet College
Washington, D.C.

Two workshops were held for the environmental compliance staff. The first workshop focused primarily on programs and activities. During that workshop, the participants developed the mission and vision statements and three strategic general goals of the program.

General Goals for Environmental Compliance

Goal 1	Restore contaminated properties
Goal 2	Ensure compliance with pollution prevention control standards at NOAA facilities
Goal 3	Sustain environmental compliance through integrating the CEMP into daily operations

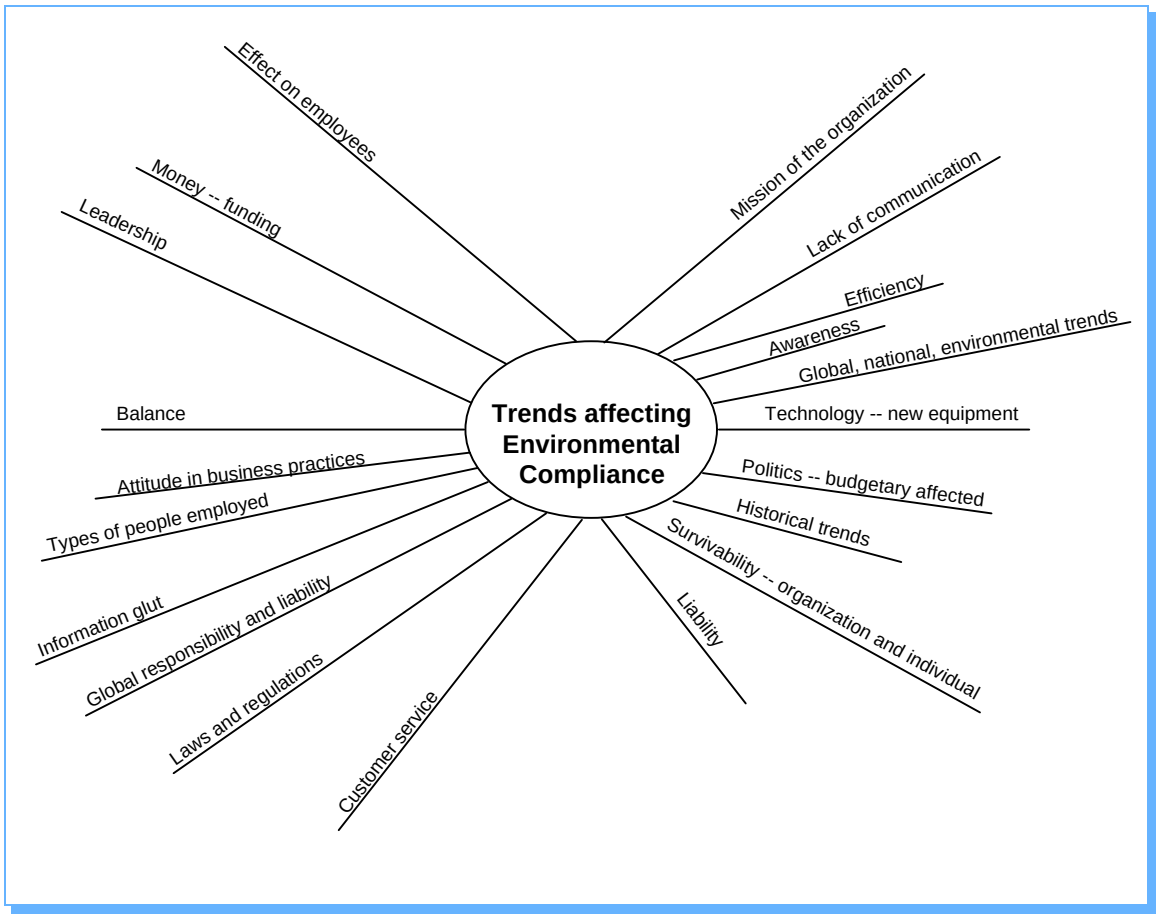
The second workshop focused primarily on environmental management systems and facilities. During that workshop, staff members identified the entire spectrum of goals and objectives as mandated by GPRA. During one of the activities of the second workshop, participants identified aspects of a comprehensive environmental program. This activity centered on developing a "mind map" of observations, examples, and ideas of the trends that currently are affecting the Environmental Compliance Program (the figure on the following page presents a simplified version of the mind map). Using the results generated during the mind map activity, the participants then determined which of these aspects are the most important and developed a list of key program elements. To rank the key program elements, the participants voted on the relative importance of the elements. That ranking can be used as a list of priorities to guide allocation of limited program funds and staff among the elements.

Priority Ranking of Key Program Elements

#1 Training
#2 Information Systems and CIMS
#3 Corrective Actions
#4 Equipment
#5 Pollution Prevention
#6 Communication
#7 Policy Development
#8 EMS Leadership
#9 Contingency Planning

Consistent with the requirements of GPRA, external stakeholders were consulted in several ways about the spectrum of goals and objectives. As an example, the Civilian Federal Agencies (CFA) Task Force is a forum for the discussion of efforts of environmental programs and activities throughout the "regulated community" of the federal government and for leveraging limited resources

Simplified Version of a "Mind Map" of Trends Affecting Environmental Compliance



for common purposes and to mutual benefit. NOAA's goals and objectives were discussed by the CFA subcommittee on budget and finance, which meets periodically to share information about the goals and objectives of their agencies. Further, NOAA representatives attended various meetings to gain useful information that influenced NOAA's goals and objectives. All of such efforts affected NOAA's Strategic Plan and are part of a process of collecting information to refine future versions of the plan.

Examples of meetings and conferences attended by NOAA representatives include:

- Monthly meetings of the CFAs
- EPA Roundtable meetings
- 1998 CFA's Task Force symposia
- 1998 Midyear Conference of the Association of State and Territorial Solid Waste Management Officials

Boundaries for Federal Programs:

legal = laws
managerial = rules
political = policies

Strategic plans are limited by public administration boundaries

Unlike business strategic plans, the strategic plans of federal agencies are limited by public administration boundaries. Within the federal government, environmental programs are defined and limited by numerous laws, rules, and policies; such limits are boundaries.

There are various perspectives on the purpose of the planning workshops

There was more to the purpose of the planning workshops than the goal of completing the mandatory elements of a strategic plan. The purpose of the workshops was to focus on the means, rather than the end. Participants attending the workshops viewed the strategic planning process from the various perspectives that reflected their diversity, as is consistent with business management literature.

One group of participants understood the workshop process as an opportunity to set objectives and goals; this is referred to as the structural perspective. Other participants viewed the process as a forum to promote participation and cooperation; this is the human resources perspective. Another group of participants understood the process as a chance to air conflicts and realign roles and responsibilities; this is the political perspective. Finally, there were participants who viewed the process as a ritual to bond and confirm values — that is, a climate for teams, partnerships, and alliances; this is the symbolic perspective. All four perspectives were represented at the workshops and added significantly to the dynamics of participation. Therefore, each participant derived something different from participation, according to that individual's perspective. All perspectives were necessary to make the planning process a success. The working relationships developed at the workshops will have enduring benefits during the implementation of the strategic plan.

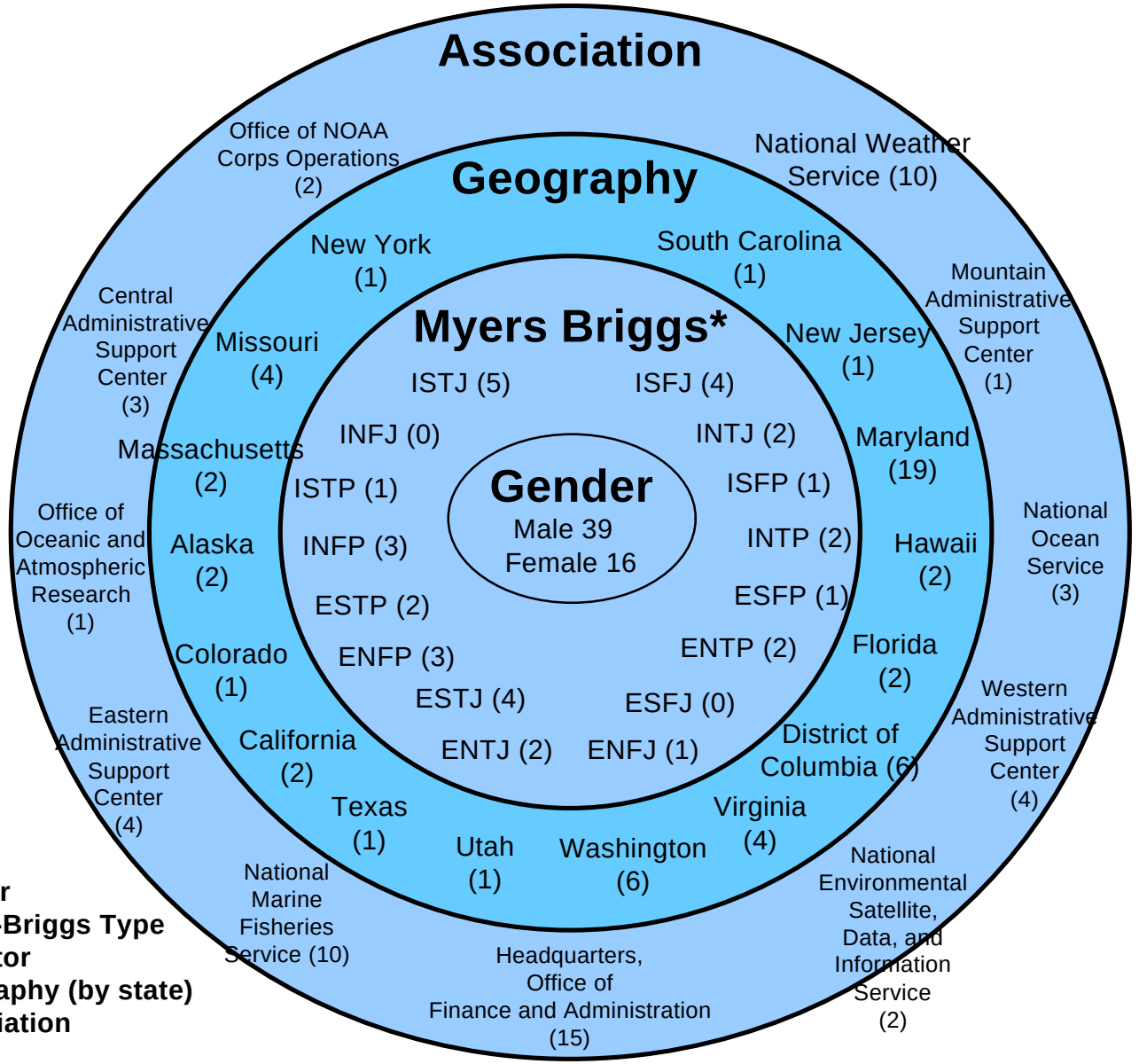
Perspectives of the Strategic Planning Process

Structural	An opportunity to set goals and objectives
Human Resources	A forum to promote participation and cooperation
Political	A chance to air conflicts and realign roles and responsibilities
Symbolic	A ritual to bond and confirm values

Appendix D

Diversity

Distribution of NOAA Internal Stakeholders



Core: **Gender**
2nd Ring: **Myers-Briggs Type Indicator**
3rd Ring: **Geography (by state)**
4th Ring: **Association**

Statistics are based on the number of NOAA staff attending two strategic planning workshops

* Myers Briggs administered at first workshop only.

Appendix E

NOAA's Environmental Compliance Network

NOAA'S ENVIRONMENTAL COMPLIANCE NETWORK Assignment of Workshop Priorities							
PROGRAM ELEMENT and PRIORITY	EMPLOYEES of LINE and STAFF OFFICES	CORPORATE TEAMS				ENVIRONMENTAL MANAGERS	
		AUDIT TEAM	CIMS-P2 TEAM	TRAINING TEAM	IT TEAM	PROGRAM	PROJECT
1. Training				✓			
2. Information and Chemical Information			✓		✓		
3. Corrective Actions	✓					✓	✓
4. Equipment						✓	✓
5. Pollution Prevention	✓		✓				
6. Communications	✓	✓	✓	✓	✓	✓	✓
7. Policy Development		✓	✓	✓	✓	✓	✓
8. Environmental Management Systems Leadership	✓	✓	✓	✓	✓	✓	✓
9. Emergency Contingency Planning and Response	✓			✓			

NOAA ENVIRONMENTAL COMPLIANCE PROGRAM
STRATEGIC PLANNING PARTICIPANTS

Lynnette Ansell
Eastern Regional Support Center
Office of Finance & Administration

William Archambault
Policy & Strategic Planning
Office of the Under Secretary

Frank Bain
Eastern Region
National Weather Service

David Belt
Management & Budget
Office of Finance & Administration

Terry Brisbin
Southern Region
National Weather Service

Richard Brown
Office of Science & Technology
National Marine Fisheries Service

Joseph Burton
Central Administrative Support Center
Office of Finance & Administration

Herman Chan
Pacific Region
National Weather Service

Carol Ciufolo
Construction Staff
Office of Finance & Administration

Ralph Conlin
Management, Operations & Analysis Office
National Environmental Satellite, Data & Information Service

William Cunningham
Program Services Division
Office of NOAA Corps Operations

Charles Deitch
Pacific Region
National Weather Service

Joseph D'Felio
Central Administrative Support Center
Office of Finance & Administration

Eva Dillard
NOAA Office of General Counsel
Office of the Under Secretary

Jean Durosko
Operations Branch
National Ocean Service

Roy Eckert
Facilities Management Division
Office of Finance & Administration

Robert Fasick
Construction Staff
Office of Finance & Administration

Mark George
Mountain Administrative Support Center
Office of Finance & Administration

Bernard Gottholm
Coastal Monitoring & Bioeffects Assessment Division
National Ocean Service

Kirt Grahl
Central Region
National Weather Service

Robert Haehnle
Environmental Compliance Staff
Office of Finance & Administration

Melissa Hartman
Office of Aeronautical Charting & Cartography
National Ocean Service

I. Sam Higuchi, Jr.
Environmental Compliance Staff
Office of Finance & Administration

Robert Hull
Eastern Administrative Support Center
Officer of Finance & Administration

Michael Jacob
Office of Systems Operations
National Weather Service

Barbara Jobe
Northeast Fisheries Science Center
National Marine Fisheries Service

Ken Jones
Resource Management Staff
Office of Atmospheric Research

Olga Kebis
Office of Systems Operations
National Weather Service

Susan Kennedy
Environmental Compliance Staff
Office of Finance & Administration

Kristen Kniskern
Management, Operations & Analysis Office
National Environmental Satellite, Data & Information Service

Herschel Knowles
Alaska Region
National Weather Service

Annette S. Kubinec
Northeast Fisheries Science Center
National Marine Fisheries Service

Richard Legatski
Legislative Affairs
Office of the Under Secretary

Gerald Lucas
Central Region
National Weather Service

Neal Marchbanks
Alaska Region
National Weather Service

Margaret McCalla
Office of Policy and Strategic Planning

Roy McCullough
Facilities Management Division
Office of Finance & Administration

Tony Mercadante
Western Administrative Support Center
Office of Finance & Administration

Dan O'Brien
Northeast Fisheries Science Center
National Marine Fisheries Service

John Pierson
Operations, Management & Information
National Marine Fisheries Service

Angela Quinn
Western Regional Center
Office of Finance & Administration

Glenn Rasch
Western Region
National Weather Service

James Schell
Pacific Marine Center
Office of NOAA Corps Operations

Ramona Schreiber
Strategic Planning Office
Office of the Under Secretary

Laura Seabeneck
Southeast Fisheries Science Center
National Marine Fisheries Service

David Shishido
Environmental Compliance Staff
Office of Finance & Administration

Jeffery Stefani
Southwest Fisheries Science Center
National Marine Fisheries Center

Dan Strandy
Western Administrative Support Center
Office of Finance & Administration

Nancy Thompson
Southeast Science Center
National Marine Fisheries Service

Minh Trinh
Western Administrative Support Center
Office of Finance & Administration

David Ulrich
Northwest Fisheries Science Center
National Marine Fisheries Service

Sherilyn Villegas
Central Administrative Support Center
Office of Finance & Administration

George Watkins
Eastern Administrative Support Center
Office of Finance & Administration

Robert Williams
Administrative & Budget Processes Division
National Marine Fisheries Service

Gina Ziegenbein
Facilities Management Division
Office of Finance & Administration

For more information, please contact:

U.S. Department of Commerce, NOAA
Environmental Compliance Program
1305 East West Highway
Building SSMC4, 8th Floor
Silver Spring, Maryland 20910
301-713-2870